ACID-TINT: TECHNIQUE, POTENTIAL AND INTUITION  
By John Driesbach

The following discussion of acid-tint is based on several semesters’ experience of including the medium in the course content of my beginning lithography class. The steps outlined are by no means foolproof (or even student proof,) but they do offer a variety of approaches and some background on reasons for selecting one approach over another.

Acid-tint provides not only a satisfying way of developing an image, but helps to clarify the role of acid and ink viscosities in establishing a successful printing element.

Applying the Acid-Tint Ground

To lay an acid-tint ground for a rectangular image, the lithographer proceeds as follows:

1. Paint a gum mask precisely around the desired shape. Allow the gum to dry.
2. Buff in asphaltum.
3. Wash out the asphaltum with lithotine or paste wax to remove dust and other impurities.
4. Replace the first coat of asphaltum with the 'acid—tint ground (various acid-tint grounds are described below). Buff.
5. Drape cheesecloth over the entire surface of the stone.
6. Pour a generous pool of gum over the center of the acid-tint area. Begin working this gum outwards until the borders are softened and the non-image areas are freed of ground. Stubborn areas may be scrubbed with the fingertips through the gum-soaked cloth.
7. Remove the cheesecloth and wash the stone with water.

You should now have an unblemished film on which to acid-tint. The cheesecloth has been used in this admittedly unusual manner to trap bits of acid tint ground from the borders. Otherwise, they would settle inside the image area (particularly near the edges) and create unanticipated dark spots. The cheesecloth should be a fine mesh lithography-oriented grade, rather than a drugstore brand.

Choosing an Acid-Tint Ground:

Several products suitable for acid—tint grounds are marketed, but some are only sold in large quantities and others may be inaccessible in certain areas of the country. Although Lith-Kem-Ko Rub Up Ink is suitable, some distributors will sell it only in cases. Triple Ink
is frequently mentioned, but is hard to come by. Both Handschy Chemical Company and R.B.P. market deep-etch developing inks, which may be used. Asphaltum and Corneline also work well, and when mixed with developing inks they provide an easily applied black surface.

Among the characteristics desired in an acid-tint ground are that it:

1. Be thin and penetrable by acid or acidified gum.

2. Be resistant enough to be affected by various degrees of acidification without losing its “grip” on the stone;

3. Does not flocculate, become waterlogged, or change its characteristics over a period of time;

4. Reacts to acidified solutions by leaving some evidence relating to the ultimate values which will emerge when printed.

Drawing on the Acid-Tint Ground

If the artist wishes to make a preparatory drawing on the stone to serve as a guide for his acid-tint, an inert material, such as iron oxide, should be employed. Rather than drawing directly on the acid-tint ground with Conte Crayon or a similar material, it is more practical to use paper coated with iron oxide and placed face downward on the stone. The image may then be transferred with pressure from a pencil or a ballpoint pen. As the guidelines will wash away during the creation of the acid-tint, the artist may wish to secure the piece of paper bearing the drawing to the stone with tape, so it may be rolled out of the way while acid-tinting is in progress. When it is needed, the iron oxide coated paper may be inserted between the drawing and the stone, and the lines reinforced. When transferring a sketch, avoid using carbon paper, graphite, or water resistant materials (including soap), which will alter the acid-tint ground. Such materials will produce lines of darker value between areas of tone.

It is usually advisable to begin an acid-tint with the lightest areas first. They may be approached slowly with mild etches of five drops of nitric per ounce, or with stronger etches, of twenty drops or more. Either way, the lighter areas can act as reference points for later work. Nitric acid is preferred for acid-tinting because it is highly corrosive and leaves more evidence of its ultimate effect than do other acids. Phosphoric acid in particular is prone to making minimal visual changes as one draws which will read as radical changes once the stone has been processed.

In addition to brushes and acidified gum, the acid-tinter will need a collection of sponges. Delicate elephant ear sponges are superb for absorbing the gum from smaller areas, but their expense can be avoided by thoroughly drying a fine pore cellulose sponge and slicing it into 1/4” sections. Larger sponges are fine for larger areas. When sponging, however, take care to rinse the sponge after each blotting, before absorbing additional gum, as reckless handling of the sponges will blur the contours of etched areas.
The steps involved in drawing can be summarized as follows:

1. Apply acidified gum.
2. Allow gum to sit for long periods of time to achieve dramatic effects, or for short periods of time for more subtle effects.
3. Blot with sponges.
4. Rinse.
5. Fan dry prior to applying the next etch.

Do not allow gum to dry on the acid-tint ground, as it can pull ground entirely off the stone as it dries. Should this occur, use the wet washout and rub up techniques mentioned below to reset the ground.

In developing the image on an acid-tint ground, it must be understood that the values achieved on the stone will not correspond precisely with those in the resulting print. Generally the print will have a broader value range, although this will depend upon the process chosen to stabilize the printing element.

**Stabilizing an Acid-Tint Ground**

The following options achieve different results because of the role of viscosity in the performance of lithographic printing. If the desired results do not appear during efforts to stabilize the image by one means, it is possible to change to another approach for better results.

1. Sponge the acid-tint ground and roll up directly and roll on it. This will yield different results depending on the viscosity of the ink used. Crayon black will pull up light values quickly, but may require proofing to realize the full range of values. A softer ink will also pull up light areas, but may fill in before a second etch can be applied.

2. Rosin and talc the image... close with gum. Use a dry washout with lithotine and apply asphaltum. Wet and roll up.

3. Wet wash and roll up while proofing.

4. Wet wash and rub up before applying a second etch, which is usually pure gum.

5. Rub up directly on the image; close with gum; proceed with steps 2 or 3.

6. Wet-wash the image. Rub up using crayon black mixed to a heavy viscosity with
lithotine in a sponge or cheesecloth. Use a leather roller and crayon black, or a softer ink, to roll on top of the thin coat established by rubbing up. The low viscosity of the ink used in rubbing up assures that ink will adhere in the delicate light areas. The tack of the ink in the roller helps to keep nearly solid areas from filling.

After one of more of the above techniques for stabilizing the image has been used, the stone must be given a second etch. If a heavy layer of ink has been established, the etch can be fairly strong without destroying the value structure. If the image is composed of only a thin layer of ink, it is imperative that only weak etches (or pure gum) be used until a less tenuous image is established. This may be accomplished by proofing up, or by replacing the grease with a lacquer printing base.

**Expectations and the Role of Intuition in Acid-Tint**

There are many reasons one may wish to use acid-tint. Well executed, the tones achieved are usually velvet-like and suggest a certain amount of depth. The medium is versatile: the use of strong etches leaves evidence of every brush stroke, and even of hot spots within the gum solution; mild etches can attain vaporous transitions.

The seductive effects obtainable are achieved at a cost. The artist must discipline himself to think in terms of the net effects of his etches, and not become enamored with the appearance of the stone in front of him. The slight alteration of surface sheen which can be accomplished with a three or four drop etch may be equivalent to a twenty percent shift of value on a photographically-calibrated gray scale. A hotter etch may show as gray on the stone, only to print as bald white. The image created is not highly visible until the stone is processed. Thus the artist must use intuition buttressed by using test stones to anticipate results. Having recourse to alternative means of establishing the image can also help engender the confidence to pursue aesthetic concerns appropriate to the acid-tint process.